

In the claims:

1. (previously presented) A method for transmission-end preparation of source-coded audio data of at least one useful signal source (1), in particular for transmission via independent AM frequency channels of a predetermined broadcast channel raster, comprising the steps of

- separating the source-coded audio data of at least one useful signal source (1) into a main data stream (HD) and at least one auxiliary data stream (ZD), where the main data stream (HD) contains at least the amount of information that is required for a comprehensible reproduction of at least one useful signal source (1) and the auxiliary data stream (ZD) contains information for quality improvement,
- modulating the main- and auxiliary data streams (HD, ZD) and accomodating in respective different independent AM frequency channels (K1, K2) of the predetermined broadcast channel raster, and
- incorporating a signaling into the main data stream (HD) on the transmitter end, which indicates whether an auxiliary data stream (ZD) is provided for the same useful signal source (1) and in what channel it is provided.

2. (currently amended) A method for receiver-end preparation of audio data, which are contained in main- and auxiliary data streams (HD, ZD), in particular for transmission via independent frequency AM channels of a

predetermined broadcast channel raster, where mutually associated main- and auxiliary data streams (HD, ZD) each originate from at least one useful signal source (1) and the mutually associated main- and auxiliary data streams are accommodated in respective different independent AM frequency channels (K1, K2) of the predetermined broadcast channel raster, ~~[[...]]~~comprising the steps of incorporating a signaling into the main data stream (HD) on the transmitter end, which indicates whether an auxiliary data stream (ZD) is provided for the same useful signal source (1) and in what channel it is provided,

- intentionally using a receiver (7) with higher reproduction quality to demodulate and decode only the main data stream (HD) or the main data stream (HD) and the auxiliary data stream (ZD), and

- demodulating and decoding at least one associated auxiliary data stream (ZD), where mutually associated demodulated and decoded data streams are linked to one another in such a way that an increase is achieved in the reproduction quality for the at least one useful data source (1), ~~and~~
~~———— incorporating a signaling into the main data stream (HD) on the transmitter end, which indicates whether an auxiliary data stream (ZD) is provided for the same useful signal source (1) and in what channel it is provided.~~

3. (cancelled).

4. (previously presented) The method according to claim 1, further incorporating additional information into an auxiliary data stream (HD), which indicates what information the auxiliary data stream contains and optionally, how the main data stream (HD) is to be combined on the receiver end with the at least one associated auxiliary data stream (ZD).

5. (previously presented) The method according to claim 2, further comprising executing the linkage of the associated main data- and auxiliary data streams in accordance with at least one of the following criteria:

- to reduce the amount of coding artifacts,
- to increase bandwidth for the reproduction of audio data,
- to generate a stereo signal.

6. (previously presented) The method according to claim 1, further comprising using the scalability of MPEG 4 data streams to separate the source-coded audio data of the useful signal source (1) into the main data stream (HD) and at least one auxiliary data stream (ZD).

7. (previously presented) A transmitter for the preparation of source-coded audio data from at least one useful signal source (1), in particular for transmission via independent AM frequency channels of a predetermined broadcast channel raster, comprising

- a separation device (2) for the audio data of a useful signal source (1) into a main data stream (HD) and at least one associated auxiliary data stream (ZD),
- a modulation unit (3) modulating the main- and auxiliary data streams, where this modulation unit (3) can in particular be supplied with carrier signals in such a way that mutually associated main- and auxiliary data streams can be transmitted in respective different independent AM frequency channels of the predetermined broadcast channel raster, and
- means for incorporating a signaling into the main data stream (HD) on the transmitter end, which indicates whether an auxiliary data stream (ZD) is provided for the same useful signal source (1) and in what channel it is provided.

8. (previously presented) A receiver for receiver-end preparation of source-coded audio data, which are accommodated in main (HD)- and auxiliary (ZD) data streams, in particular for transmission via independent AM frequency channels of a predetermined broadcast channel raster, comprising

- a demodulation unit (8) and decoding unit (9) for at least the main data stream (HD) or for the main data streams (HD) and the auxiliary data stream (ZD),
- an evaluation unit (10) for a signaling and optional additional information, where the signaling indicates which of the independent AM channels of the predetermined broadcast channel raster contains an auxiliary data stream (ZD)

associated with a main data stream (HD) and the optionally provided additional information indicate what information the auxiliary data stream (ZD) contains and how the main data stream (HD) is to be combined with the at least one auxiliary data stream (ZD) on the receiver end,

- a linkage unit for mutually associated main- and auxiliary data streams, which can be controlled by the evaluation unit (10), and

- means for incorporating a signaling into the main data stream (HD) on the transmitter end, which indicates whether an auxiliary data stream (ZD) is provided for the same useful signal source (1) and in what channel it is provided.